

Reconsideration and allowance of the claim is respectfully requested in view of the following remarks.

Claims 1-9, 21-36, and 48-57 have been rejected under 35 U.S.C. 102(e) as being unpatentable over U.S. Patent No. 5,962,844 to Merrill et al (Merrill).

Claim 1 recites, in part: a plurality of transfer transistors, each transfer transistor having a first terminal connected to said second terminal of said photosensor, a second terminal, and a third terminal connected to a separate one of a plurality of transfer lines; and a plurality of storage nodes, each storage node coupled to a separate one of said second terminal of said plurality of transfer transistors.

Merrill fails to disclose the structure recited in claim 1. Rather, Merrill discloses photodiode 402 coupled to reset transistor 404 and capacitor 412. Capacitor 412 is coupled to transistor 408, which receives signal 'xbar,' and buffer transistor 416. Col. 8, lines 58-66. Merrill fails to disclose claim 1, namely "a plurality of transfer transistors, each transfer transistor having a first terminal *connected to said second terminal of said photosensor*, a second terminal, and a third terminal connected to a transfer line; and *a plurality of storage nodes, each storage node coupled to a separate one of said second terminal of said plurality of transfer transistors.*" Claim 1 is in condition for allowance.

Claims 2, 4-9, and 21-27 depend from claim 1 and are in condition for allowance.

Claim 28 has been amended in a manner similar to that of claim 1. Claim 28 reads in part: a plurality of transfer transistors, each transfer transistor having a first terminal connected to a separate one of said plurality of second terminals of said photosensor, a second terminal, and a third terminal connected to a transfer line; and a plurality of storage nodes, each of said plurality of storage nodes coupled to a separate one of said second terminals of said plurality of transfer transistors. The same arguments directed towards claim 1 apply to claim 28. Claim 28 is in condition for allowance.

Claims 29, 31-36, 48-54 depend from claim 28 and are in condition for allowance.

Claim 55 recites, in part: a method of operating an active pixel sensor having a photosensor, a reset transistor, a plurality of storage nodes coupled to said photosensor and means coupled to said plurality of storage nodes for outputting a value from any of said plurality of storage nodes comprising. Merrill fails to disclose claim 55. Rather, Merrill discloses that at the end of the current integration interval, a new integrated output signal is available as the photodiode output at the side of the capacitors . . . the capacitor which had been storing the previous frame's output signal now has a signal representing the difference between the current and previous frame's output signals on its right side. Col. 9, lines 26-34. Merrill fails to disclose a means . . . for outputting a value from any of said plurality of storage nodes comprising. In Merrill, the difference between nodes is available as the photodiode output, but not the value from any of said plurality of storage nodes. Claim 55 is in condition for allowance.

Claims 56 and 57 depend from claim 55 and are in condition for allowance.

In view of the foregoing, consideration and an early allowance of this application are earnestly solicited.

Respectfully submitted,

Sierra Patent Group, Ltd.

A handwritten signature in black ink, appearing to read 'Kenneth D' Alessandro', written over a horizontal line.

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**VERSION WITH MARKED-UP CHANGES**In the Claims:

1. (Amended) An active pixel sensor disposed on a semiconductor substrate, comprising:
a photosensor having a first terminal and a second terminal, said first terminal coupled to a first reference potential;
a reset transistor having a first terminal coupled to said second terminal of said photosensor, a second terminal coupled to a reset potential, and a third terminal coupled to a reset line; [and]
a plurality of transfer transistors, each transfer transistor having a first terminal connected to said second terminal of said photosensor, a second terminal, and a third terminal connected to a transfer line; and
a plurality of storage nodes, each storage node coupled to a separate one of said second terminal of said plurality of transfer transistors [photosensor].
3. (Amended) An active pixel sensor as in claim 1, further including a plurality of transfer lines, wherein each of said plurality of transfer lines is connected to a separate one of said third terminal of said plurality of transfer transistors [a plurality of transfer lines, wherein each separate one of said plurality of storage nodes is coupled to said second terminal of said photosensor by a separate one of a plurality of transfer transistors having a first terminal connected to said second terminal of said photosensor, a second terminal connected to said separate one of said plurality of storage nodes, and a third terminal connected to a separate one of said plurality of transfer lines].

28. (Amended) An active pixel sensor disposed on a semiconductor substrate, comprising:

a photosensor having a first terminal and a plurality of second terminals, said first terminal coupled to a first reference potential;

a reset transistor having a first terminal coupled to said at least one of said plurality of second terminals of said photosensor, a second terminal coupled to a reset potential, and a third terminal coupled to a reset line; [and]

a plurality of transfer transistors, each transfer transistor having a first terminal connected to a separate one of said plurality of second terminals of said photosensor, a second terminal, and a third terminal connected to a transfer line; and

a plurality of storage nodes, each of said plurality of storage nodes coupled to a separate one of said second terminals of said plurality of transfer transistors [photosensor].

55. (Amended) A method of operating an active pixel sensor having a photosensor, a reset transistor, a plurality of storage nodes coupled to said photosensor and means coupled to said plurality of storage nodes for outputting a value from any of said plurality of storage nodes comprising [the steps of]:

turning on the reset transistor to place a reset potential on said photosensor;

transferring charge from said photosensor to a first of the plurality of storage nodes for a first duration; and

transferring charge from said photosensor to a second of the plurality of storage nodes for a second duration.